

## Public and Corporate Policy



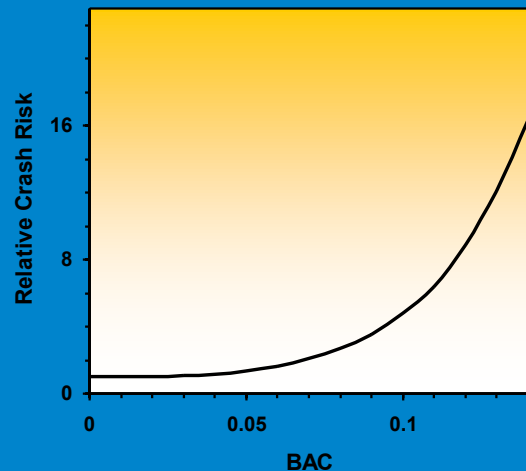
Hans P. A. Van Dongen, Ph.D.

Director, Sleep and Performance Research Center, Washington State University

# What Roles do Laws Play in Shaping Behavioral Norms?

## What Are Key Components of an Effective Law?

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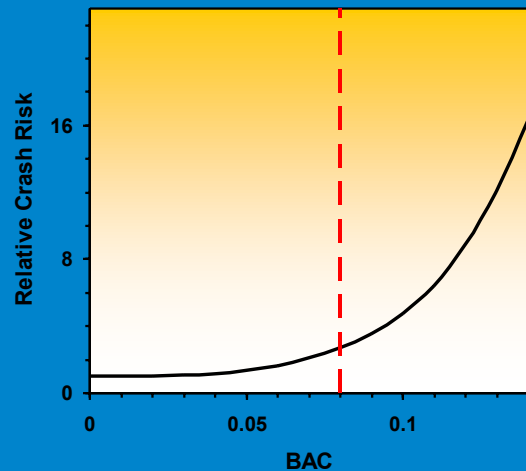


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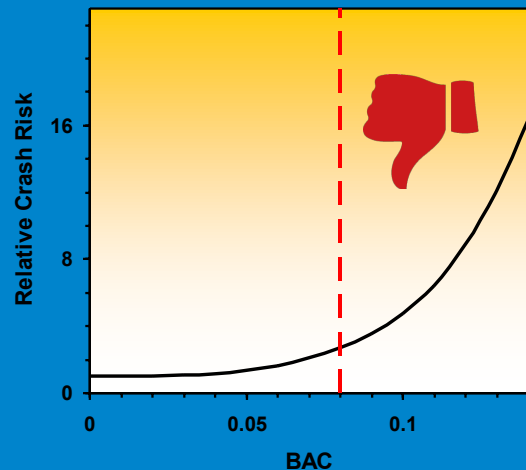


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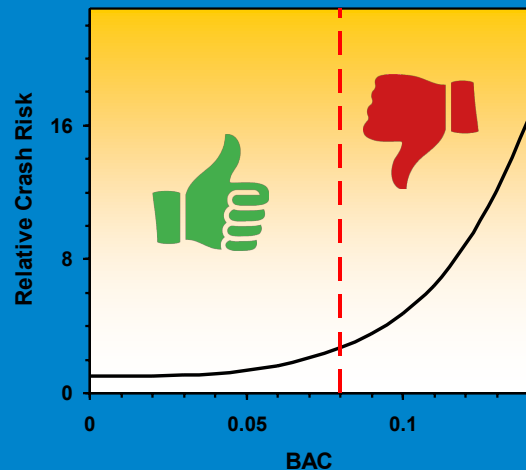


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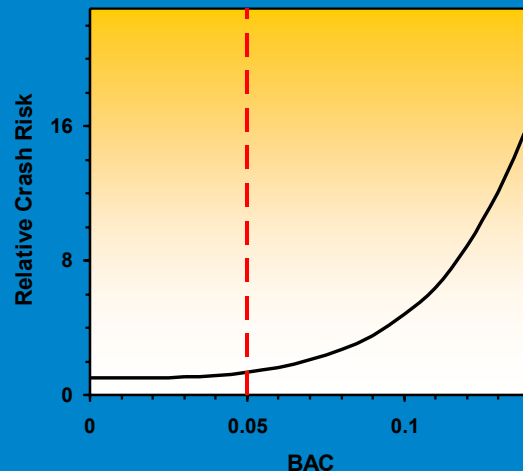
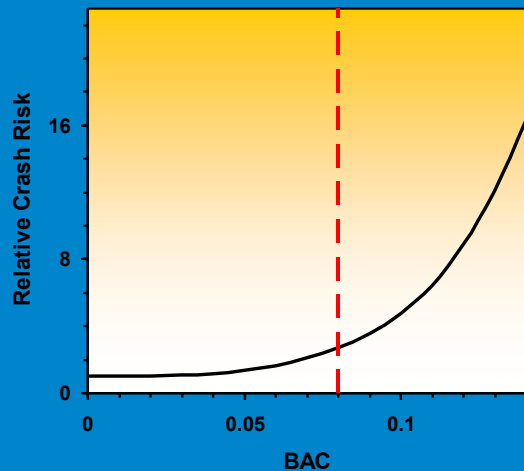


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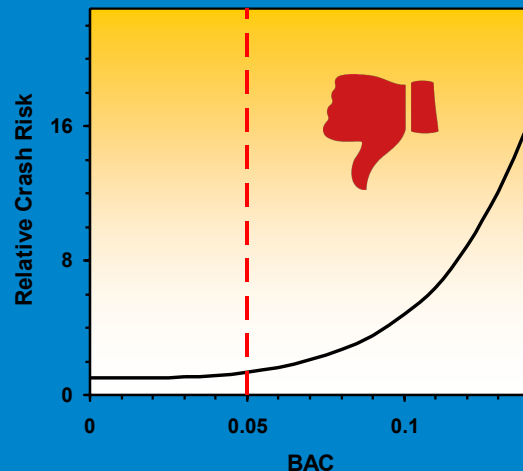
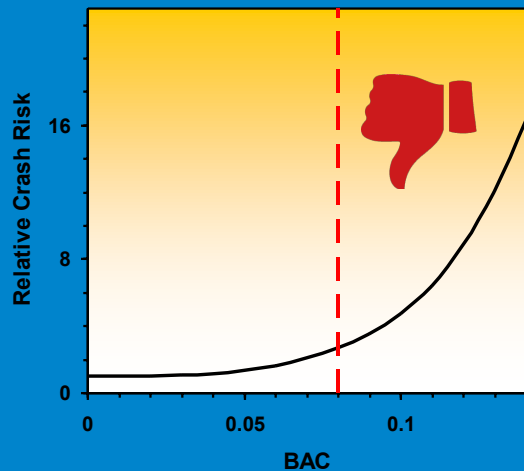


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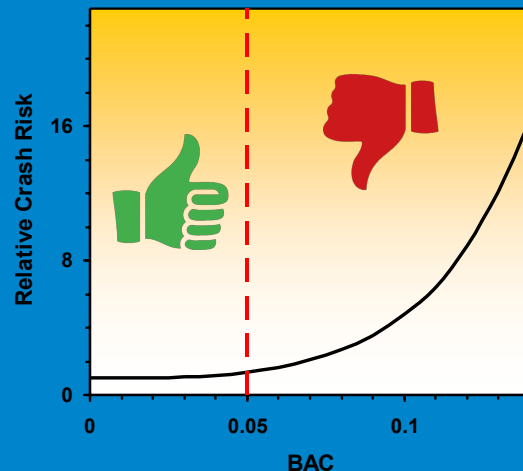
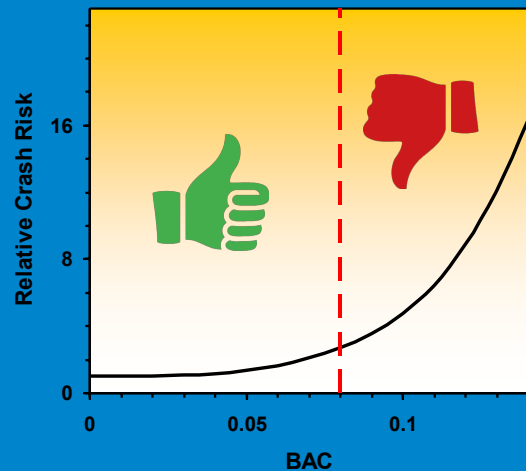


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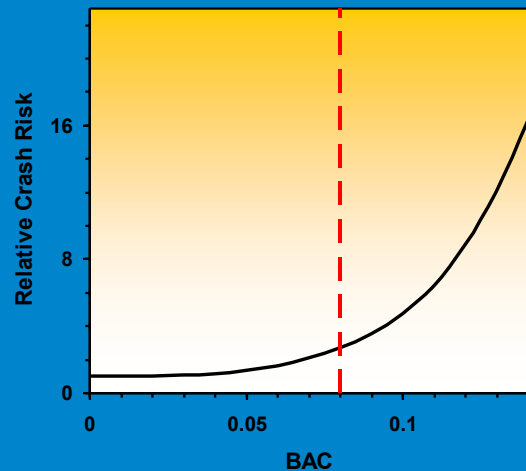
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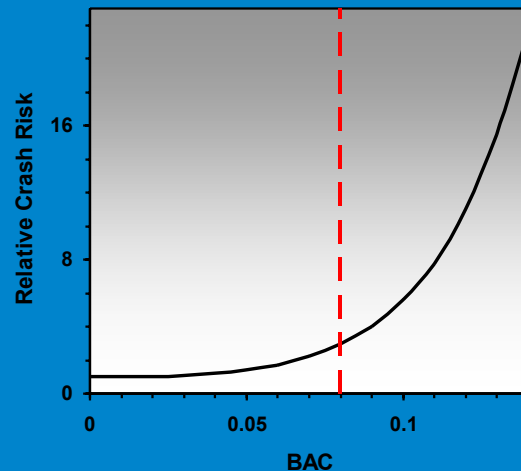
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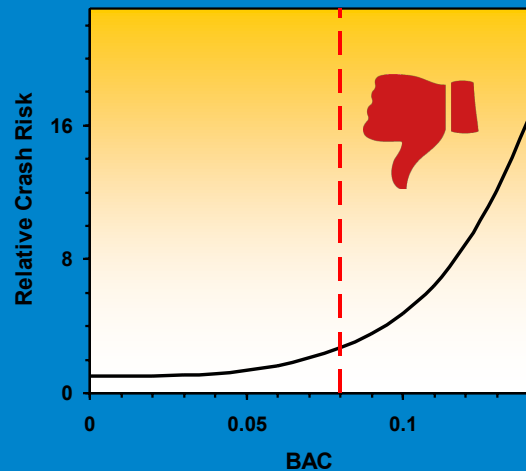
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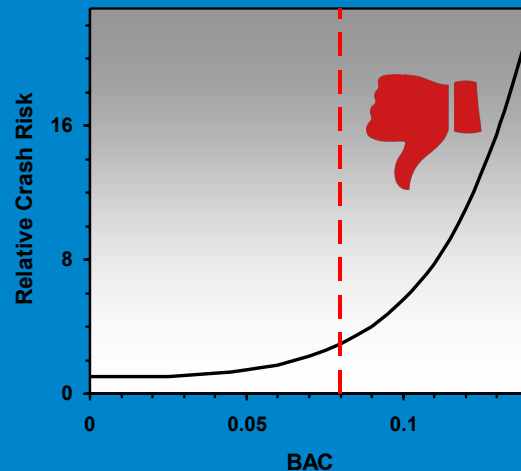
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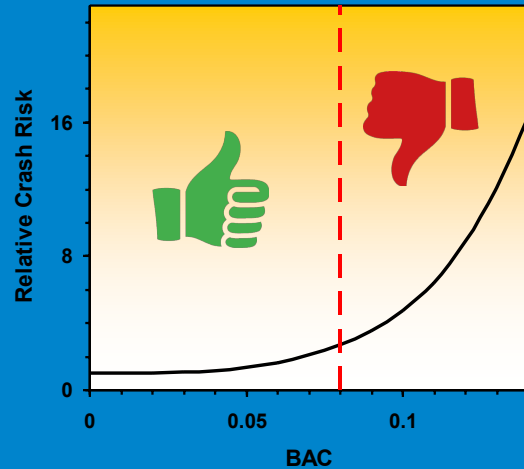
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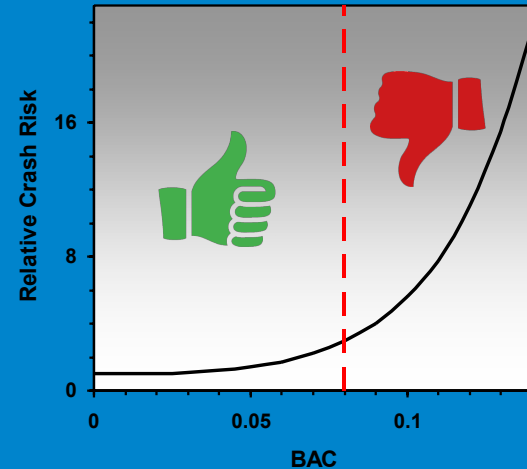
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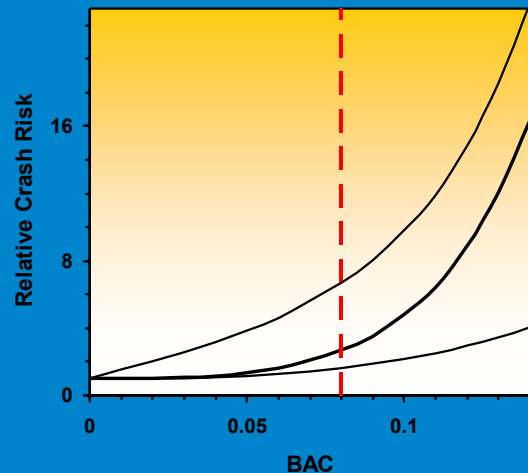
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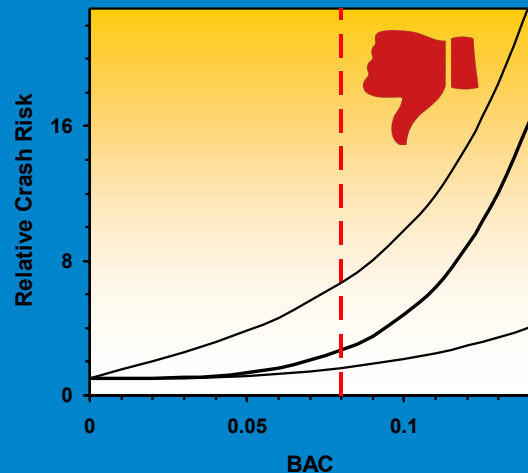


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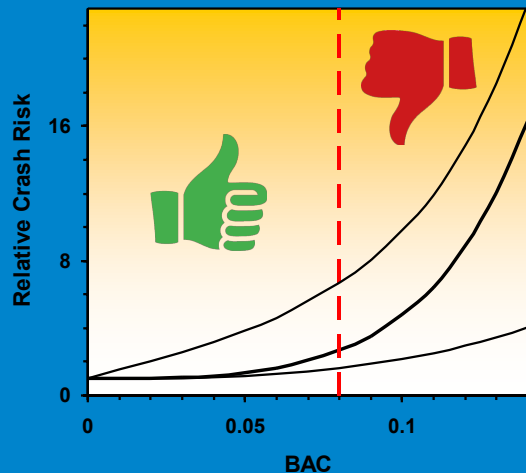


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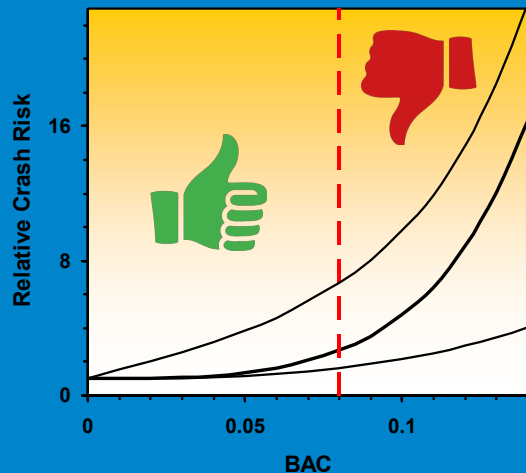


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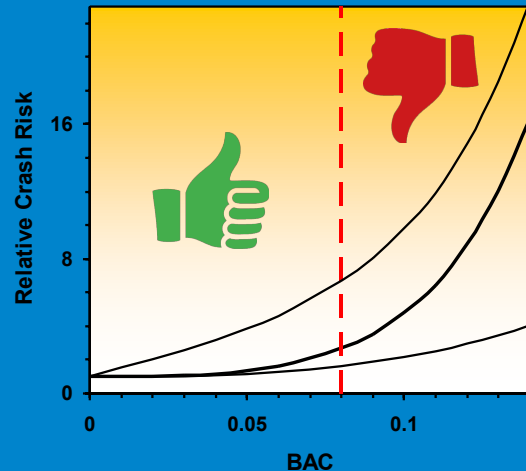


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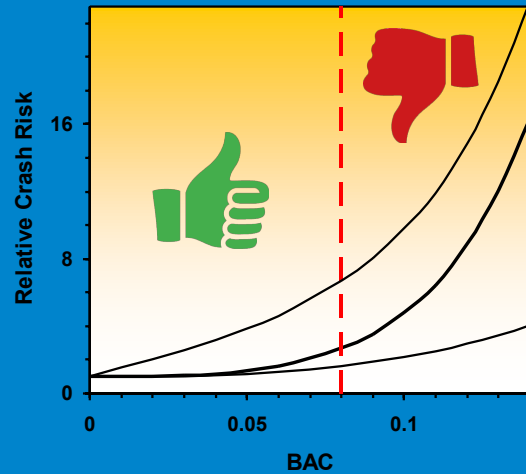
For alcohol and driving, applying a fixed threshold is consistent (logical)



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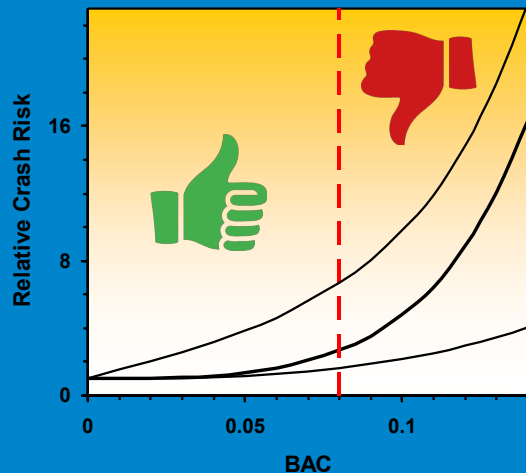


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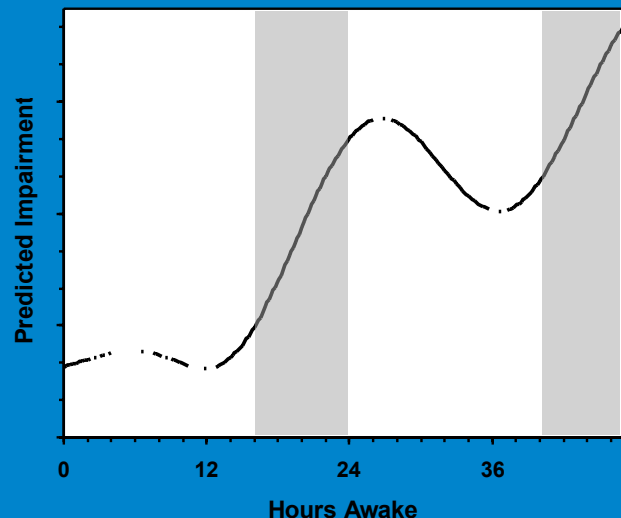


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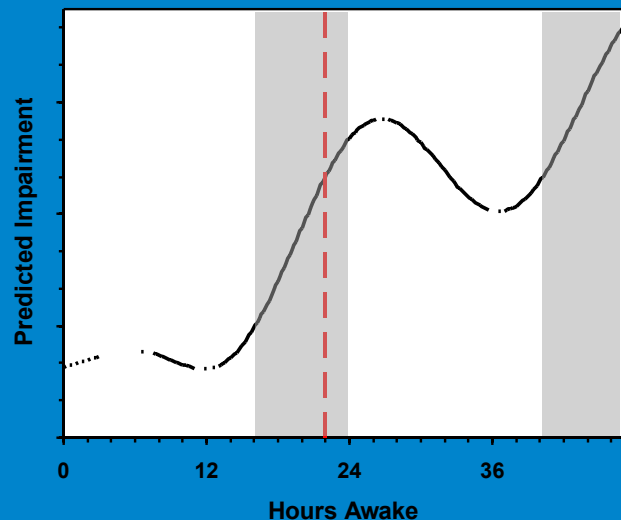


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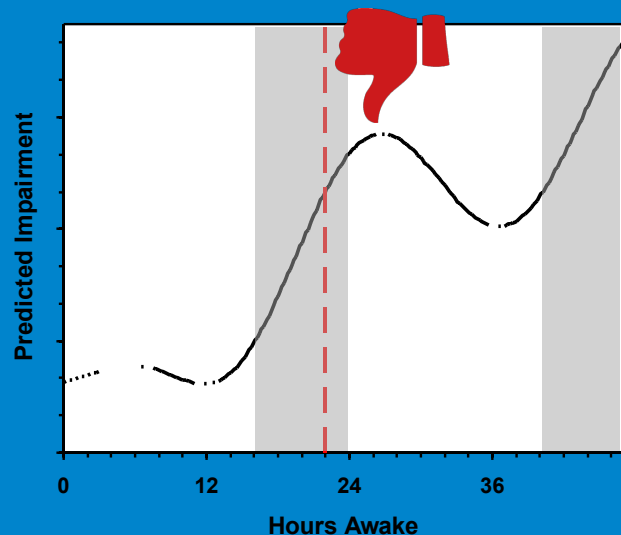


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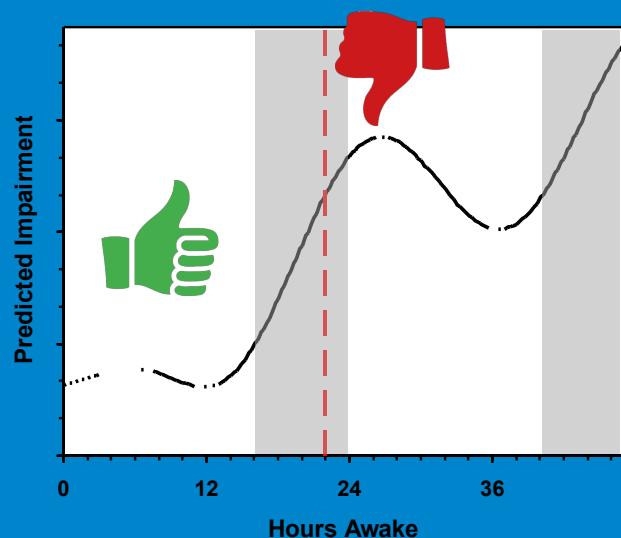


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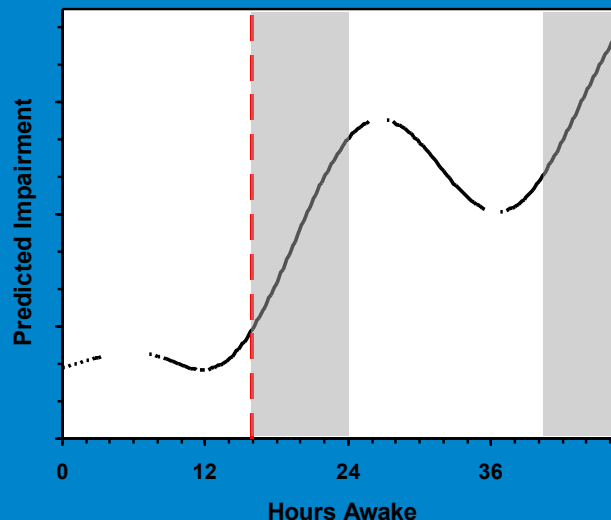
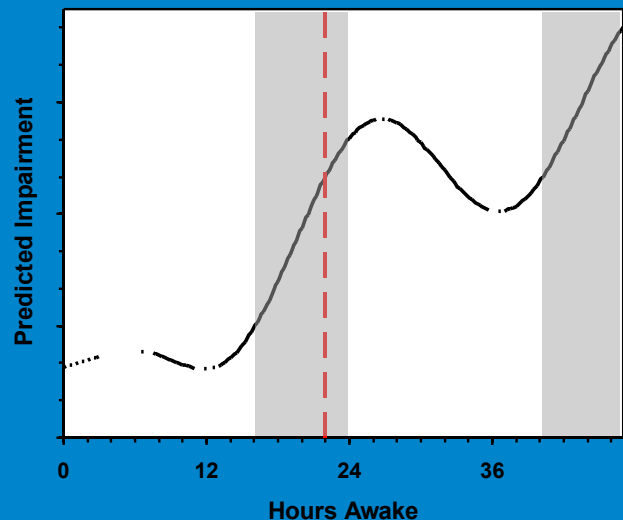


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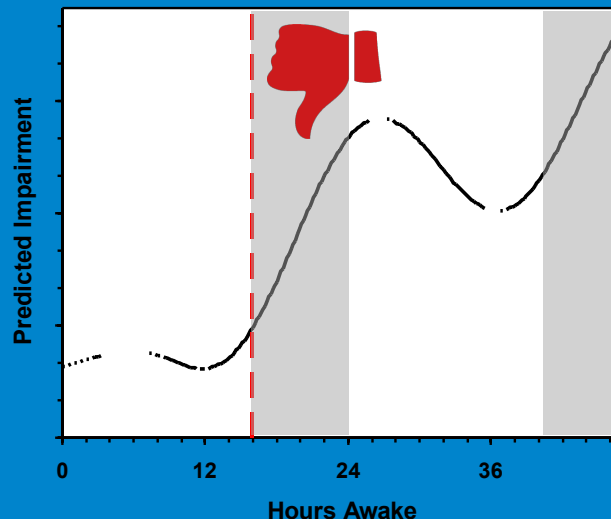
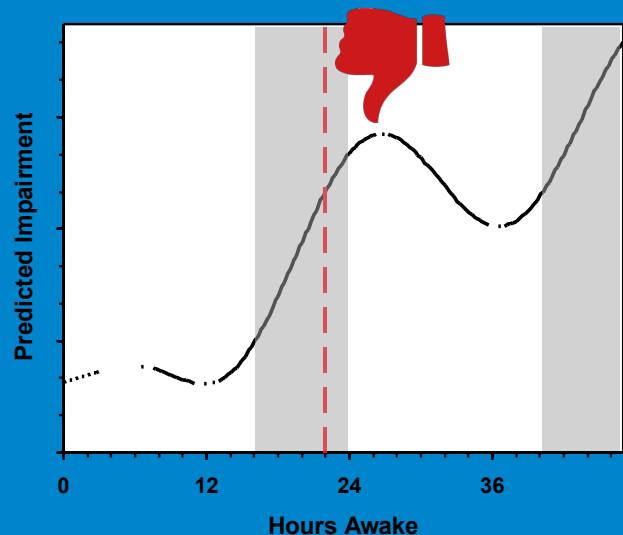


different  
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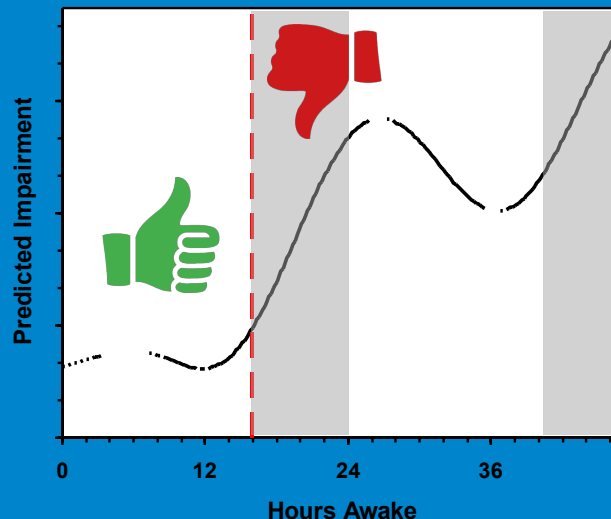
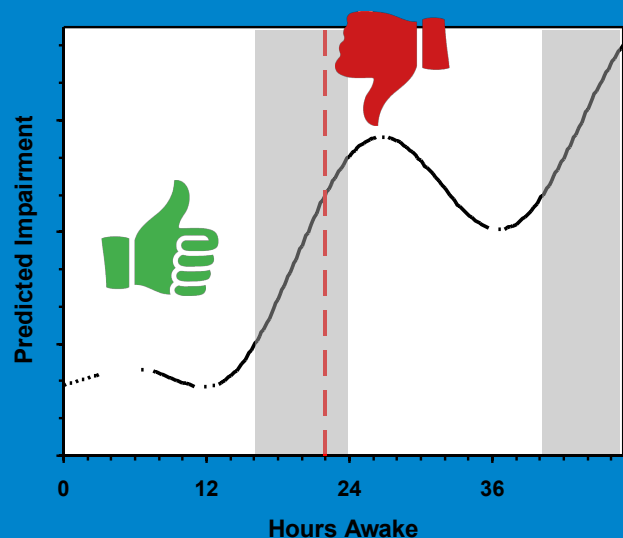
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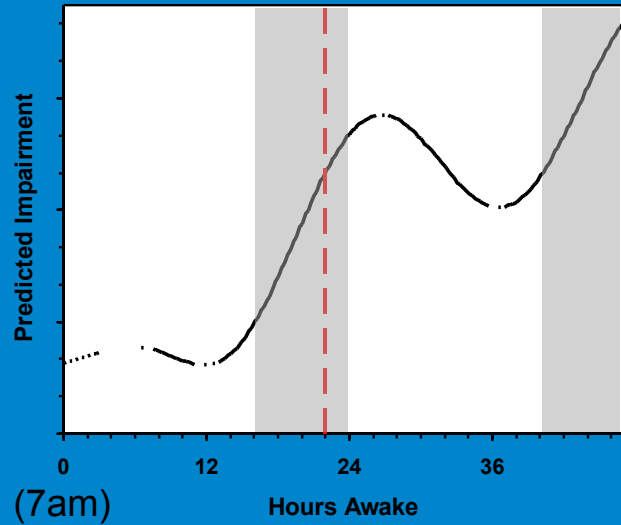


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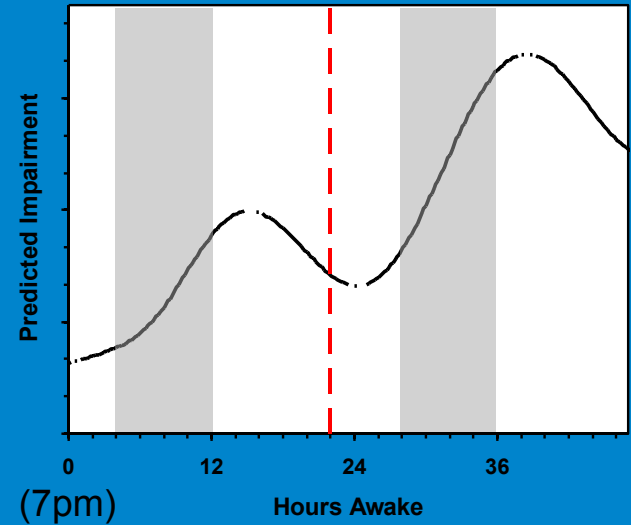
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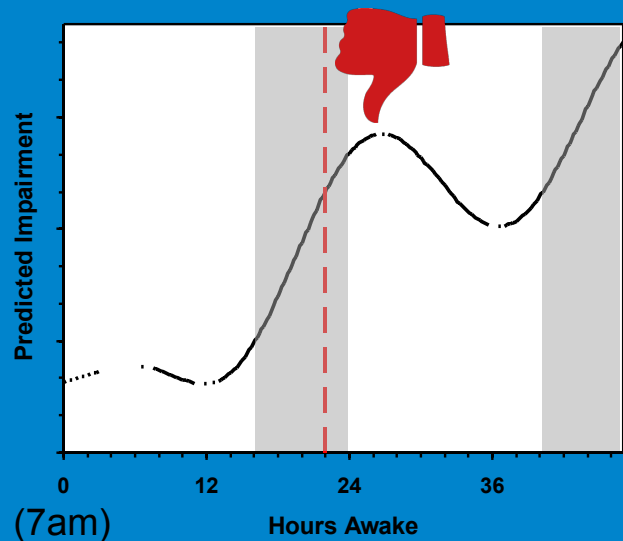
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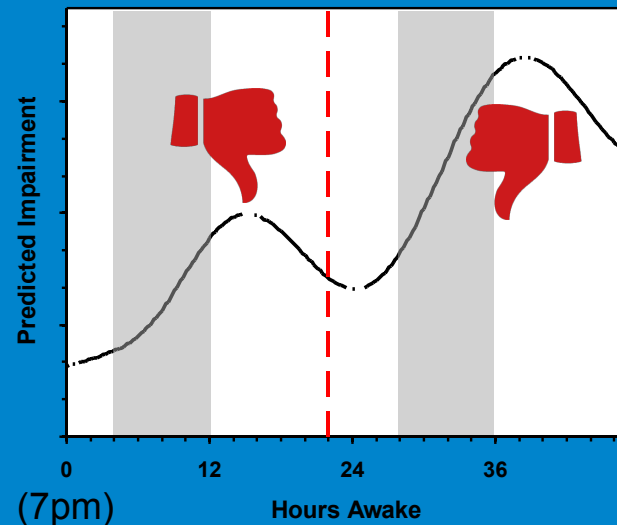
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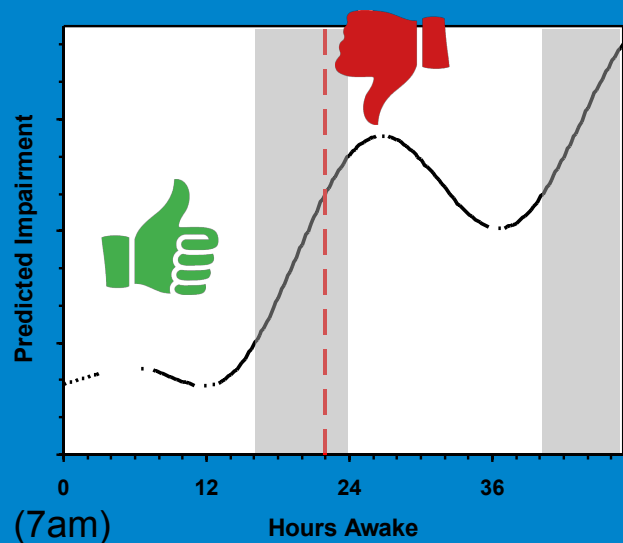
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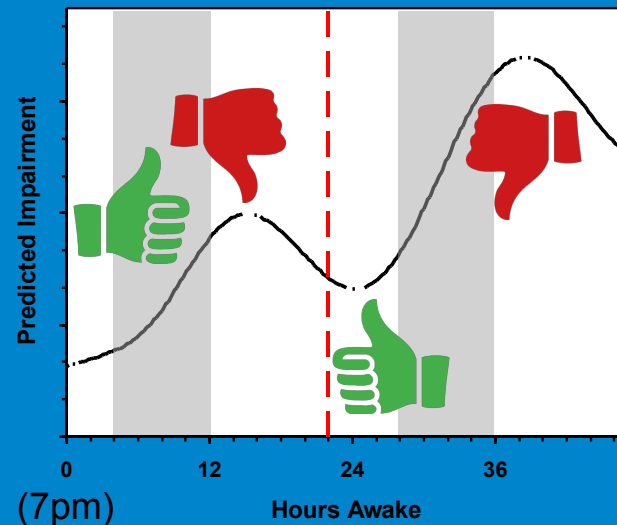
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- For time awake and driving, applying a fixed threshold of maximum allowable time awake is
  - Not logically consistent
  - Not behaviorally predictable in terms of consequences
  - Not legally fair?
- Unintended consequence of a fixed threshold of maximum allowable time awake: Would make it non-compliant to wait for a safer time to drive (unless one has both the ability and the opportunity to sleep)

# What Are Key Components of an Effective Law?

- Taking into account time of day: example of flight time regulations for commercial aviation pilots (14 CFR 117, Table B)

Scheduled Time of Start (Acclimated Time)	Maximum Flight Duty Period (hours) Limits for Lineholders Based on Number Of Operational Flight Segments						
	1	2	3	4	5	6	7+
0000-0359	9	9	9	9	9	9	9
0400-0459	10	10	10	10	9	9	9
0500-0559	12	12	12	12	11.5	11	10.5
0600-0659	13	13	12	12	11.5	11	10.5
0700-1159	14	14	13	13	12.5	12	11.5
1200-1259	13	13	13	13	12.5	12	11.5
1300-1659	12	12	12	12	11.5	11	10.5
1700-2159	12	12	11	11	10	9	9
2200-2259	11	11	10	10	9	9	9
2300-2359	10	10	10	9	9	9	9

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- State of drowsiness may or may not be by voluntary choice
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  - Need to manage *risk*
- Risk management strategies may include:
  - Sanctioned workplace napping; after-work sleep facility
  - Access to public transportation
  - Wearables as risk awareness and feedback tools
  - Drowsy driver detection technologies
  - Mathematical modeling of fatigue (Federal Railroad Administration: requirement to analyze work schedules with fatigue modeling tools)
  - Sleep disorders check-ups

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  - Shared responsibility
    - Employer/employee
    - Self vs. other road users
  - Fatigue calls (calling off when too tired)
    - Socially acceptable; without retribution, teasing, etc.
    - Resilient system (not moving drowsiness problem to someone else)

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## What should the policies look like?

- Cultural change (continued)
  - Drowsiness proofing
    - Buddy system (looking after each other)
    - Improved scheduling practices
    - Sufficient staffing
    - Multiple layers of protection against drowsiness risks



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    - Other behavioral economic drivers?

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  - Insurance premium incentives for safe practices
    - Other behavioral economic drivers?
- Evaluate and share what works to change behavior!

*Safer drivers. Safer cars. Safer roads.*



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